

ABSTRACT

This invention is directed to the prevention of the deterioration of the accuracy in component mounting by suppressing the temperature rise of the moving member as much as possible by cooling the moving member, which is the heat source of a linear motor.

The moving member 48 of the linear motor 14 is configured in the following manner for achieving the objective of this invention. That is, the heat dissipation portion, the axis 17 made of the material with efficient thermal conduction such as aluminum, pierces through the iron core 18 around which coils 20 are wound. The moving member except a part of the axis 17 is molded with synthetic resin, and at one end of the axis 17, the heat dissipation fin 19 which makes heat dissipation area larger is formed. And this heat dissipation fin 19 is placed to face the air exhaust port 67. By configuring the moving member in aforementioned manner, the temperature rise is suppressed even if the coils 20 generate heat, because the heat in the coils 20 is transmitted to the iron core 18 and then to the axis 17 and dissipated through the heat dissipation fin 19. The heat in the outermost part of the iron core 18 from the heat dissipation fin 19 is also transmitted to the heat dissipation fin 19 through the axis 17 resulting in the suppression of the temperature rise of the moving member as a whole.